

Instructions for use of OH-N-531-CAD

- This is the Ohio Plank Wall Standard Drawing. Updated/redrawn by Greg Wells in April 2014. Title Block information was removed for posting to the web site in June 2015.
- This drawing is intended to be used in conjunction with OH-N-203-CAD (Concrete Slab Details).
- The drawing contains several layout tabs, which can be selected to fit your situational need.
- The first “Basic Layout” contains all the necessary Plank Wall Details, with an open/blank area at the lower right corner of the drawing. This area is reserved for a plan view of your specific post layout or can be used for other details as needed.
- The “Layout w Drain” tab contains all the Plank Wall Details and the lower right corner shows a detail for installing a perimeter drain around the structure to address high water table. This detail also shows backfill to 2/3 of wall height.
- The “Layout w Gate” tab contains all the Plank Wall Details and the lower right corner shows the standard detail for a manure storage gate. This would be used on structures built with all four sides enclosed with plank walls and an opening(s) for entrance to the structure for manure removal.
- The “Layout w Picket” tab contains all the Plank Wall Details and the lower right corner shows the standard detail for a picket type wall, used for bleeding liquid from the storage.
- The last two layouts show the Manure Gate and Picket Wall details separate from the rest of the drawings. The two details are available from the CADalog as details to be used in other drawings as needed.

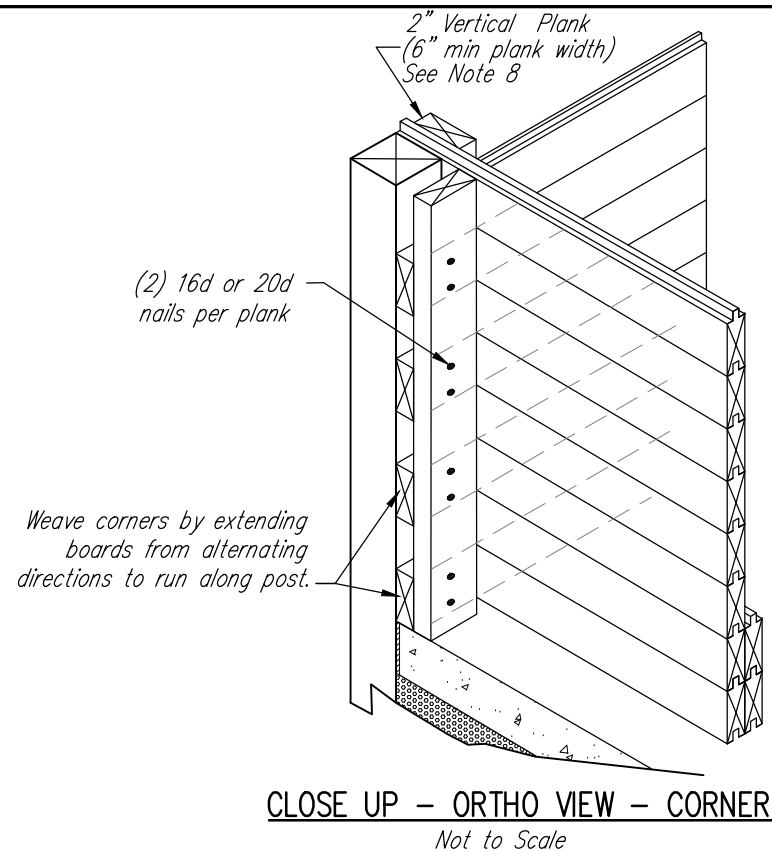
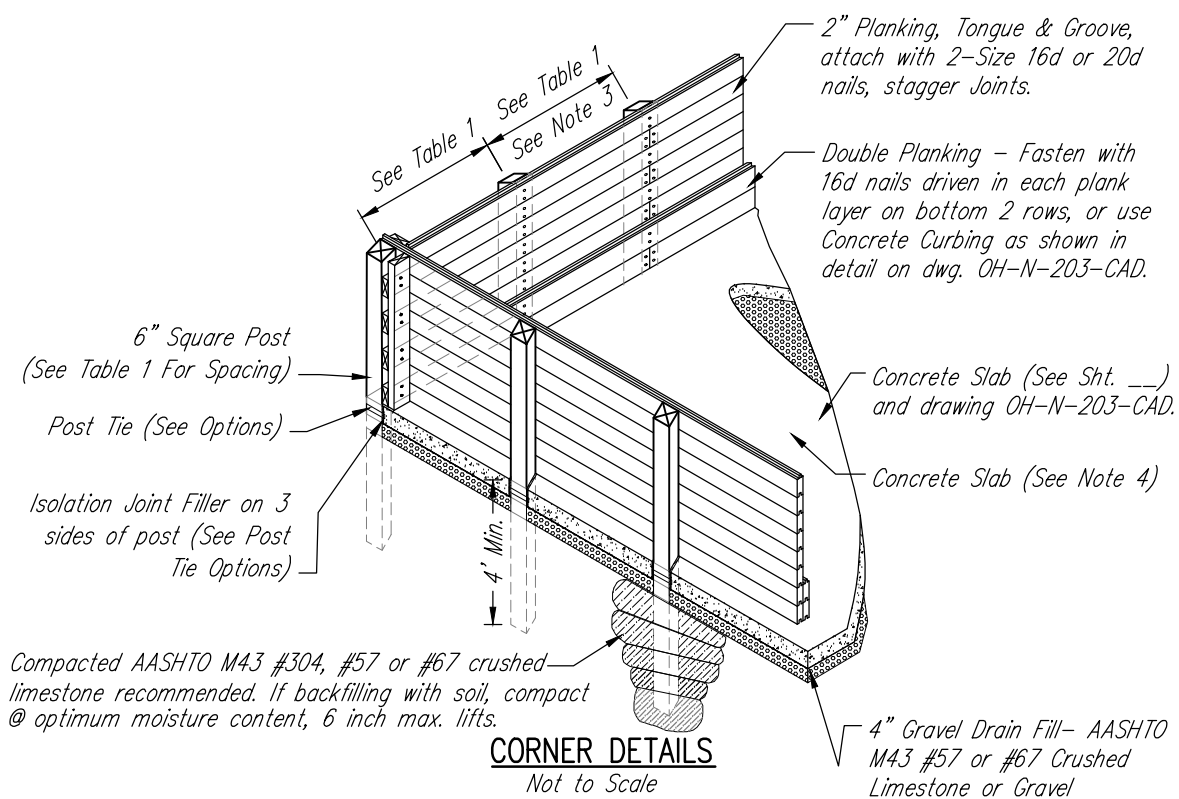
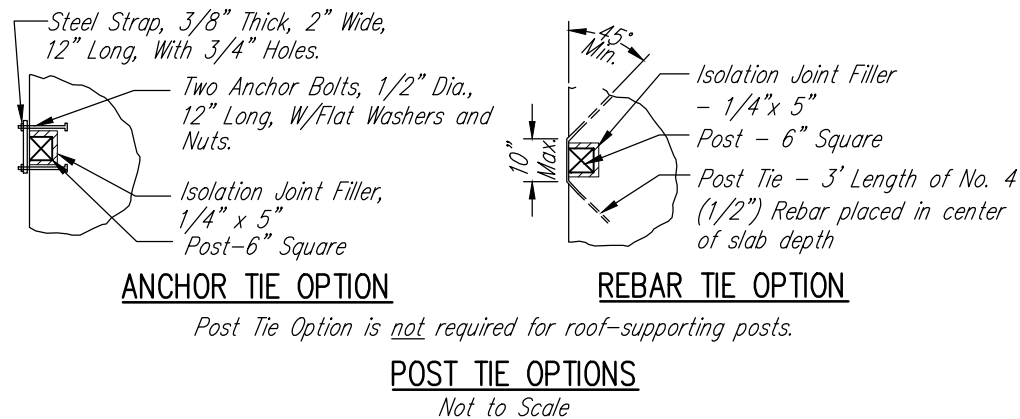
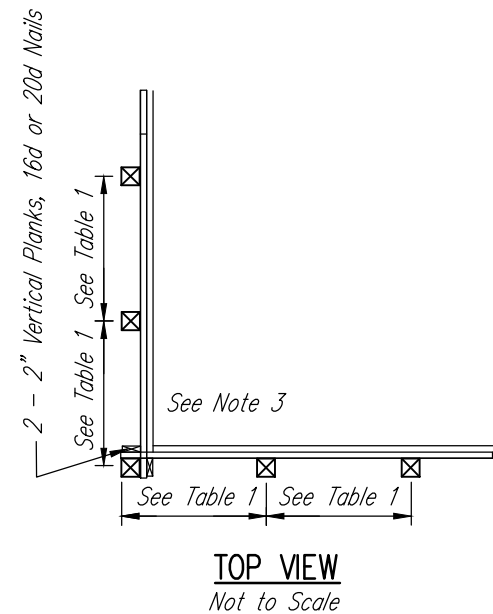


TABLE 1 – MAXIMUM WALL HEIGHT FACILITIES WITHOUT A ROOF			<i>Select Scenario to Use: (X)</i>
<i>MAXIMUM POST SPACING 6"x 6" No. 1 & 6"x 8" No. 2</i>	<i>MAXIMUM WALL HEIGHT, h (FT.)</i>		
	<i>Manure*</i>	<i>Compost*</i>	
<i>2.5</i>	<i>5.5</i>	<i>5.5</i>	
<i>3.0</i>	<i>5.0</i>	<i>5.5</i>	
<i>4.0</i>	<i>4.5</i>	<i>5.5</i>	
<i>4.5</i>	<i>4.0</i>	<i>5.5</i>	
<i>5.0</i>	<i>3.5</i>	<i>5.5</i>	
<i>6.0</i>	<i>2.5</i>	<i>4.5</i>	
<i>6" x 6" No. 2</i>	<i>Manure*</i>	<i>Compost*</i>	
<i>2.5</i>	<i>4.7</i>	<i>5.5</i>	
<i>3.5</i>	<i>4.5</i>	<i>5.0</i>	
<i>4.0</i>	<i>4.0</i>	<i>5.0</i>	
<i>4.5</i>	<i>4.0</i>	<i>4.5</i>	
<i>5.0</i>	<i>3.5</i>	<i>4.5</i>	
<i>6.0</i>	<i>2.5</i>	<i>4.0</i>	

* Note: Manure loading = 60 lbs./ Cu.Ft.
Compost loading = 35 lbs./Cu.Ft.

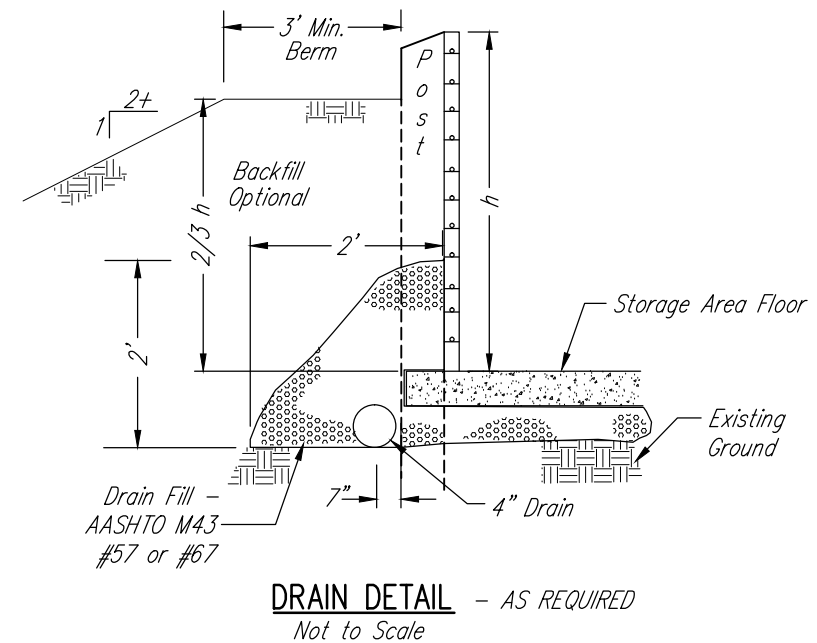
* Note: For roofed structures, maximum wall heights are as follows:

	Manure	Compost
For roof spans ≤ 32'	4.5'	5.5'
For roof spans > 32'	4.0'	5.0'



CONSTRUCTION NOTES:

- All posts shall be grade stamped No. 2 or better (See Table 1), 0.6 Pounds per Cubic Foot retention Chromated Copper Arsenate (0.6 PCF CCA), Southern Yellow Pine (S.Y.P.). [All other lumber No. 2 or better, S.Y.P., 0.4 PCF CCA., and all fasteners shall be galvanized.]
- If any other ACQ or MCQ type Preservative Treatment is used, then retention rates shall be the equivalent as for CCA, but all fasteners shall be hot dipped galvanized or stainless steel.
- Table 1 is for solid tongue and groove plank walls, manure loading at 60 PCF and compost at 35 PCF. Any changes must be approved by the State Conservation Engineer.
- See NRCS "Concrete" Construction Specification, 210-VI-Engineering Field Handbook, Exhibit OH17-1 for concrete slab requirements.
- Maximum inside height of wall shall be 5.5 feet. Back fill optional, maximum height = $2/3h$.
- Post ties are not required when back filling to $2/3$ the wall height, h . Post ties are required on all wall posts, included corner posts.
- All plank joints shall be 2" nominal thickness, stagger joints.
- For corner assembly, saw tongue off horizontal planks to merge at post. Vertical plank width shall match width dimension of adjacent post.
- Isolation joints shall be used where newly poured concrete abuts existing concrete or abuts to a different, non-yielding structure or material (e.g. buildings, or posts).
- When using pneumatic nailing guns, the pneumatic equipment and equivalent nail sizes shall be approved by the NRCS engineer prior to use.



CLIENT: _____
PLANK WALL & PERIMETER DRAIN

United States Department of Agriculture
Natural Resources Conservation Service

File No. _____
Drawing No. OH-N-531-CAD
Sheet _____ of _____

DATE APPROVED TITLE
04/04 A.M. Brate State Cons. Engineer
06/15 B.D. Jordan St. Cons. Eng. (Acting)

DESIGNED _____
DRAWN _____
CHECKED _____
APPROVED _____
County, Ohio Township _____

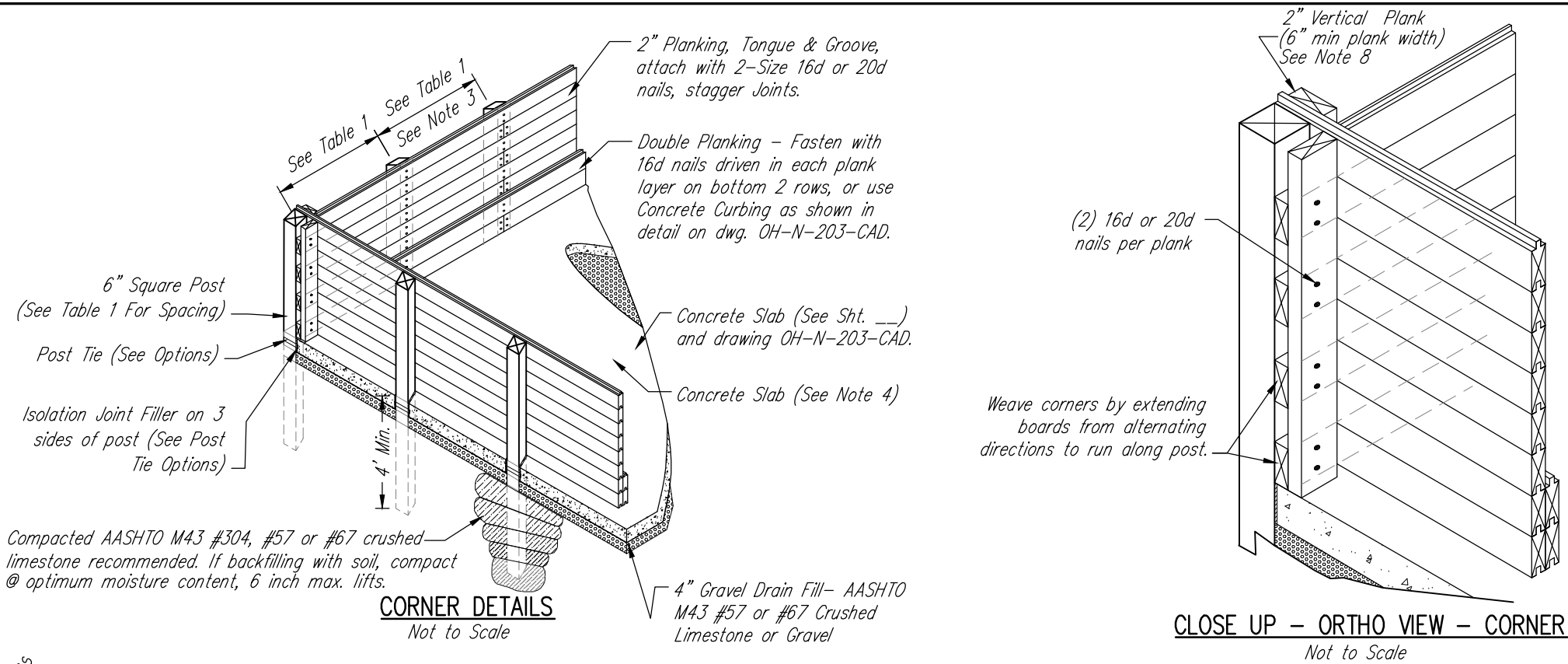
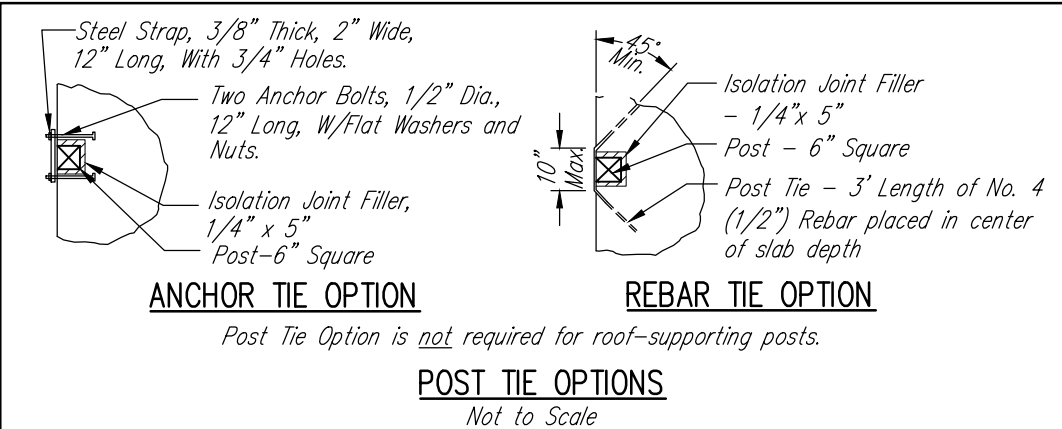
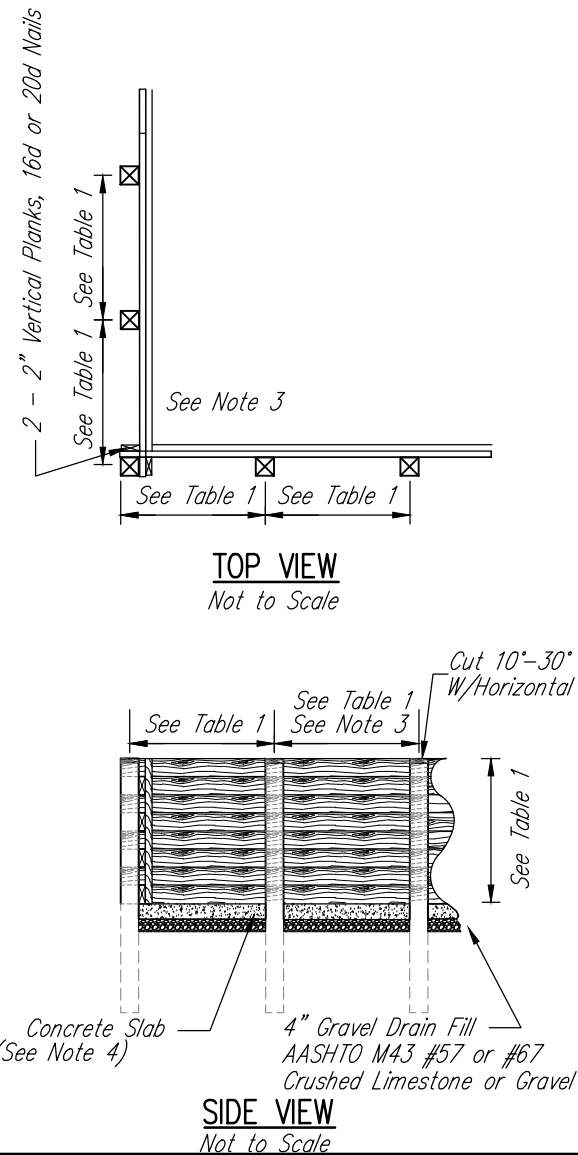


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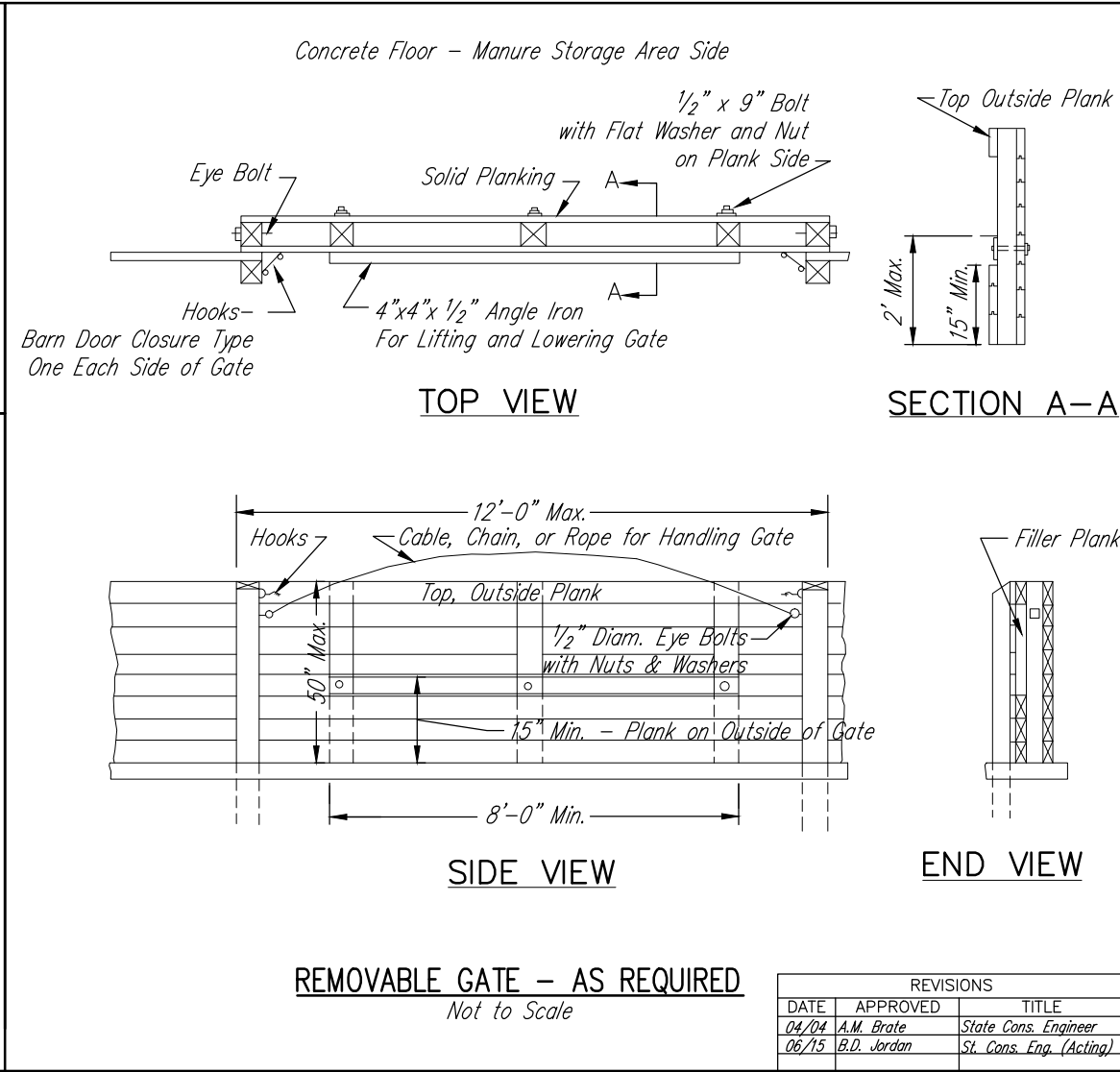
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REMOVABLE GATE – AS REQUIRED
Not to Scale

REVISIONS		
DATE	APPROVED	TITLE
04/04	A.M. Brate	State Cons. Engineer
06/15	B.D. Jordan	St. Cons. Eng. (Acting)

CLIENT: _____

PLANK WALL & GATE DETAIL

United States Department of Agriculture
Natural Resources Conservation Service

File No. _____

Drawing No. OH-N-531-CAD

Sheet _____ of _____

County, Ohio

Township _____

Date _____

Designed _____

Drawn _____

Checked _____

Approved _____

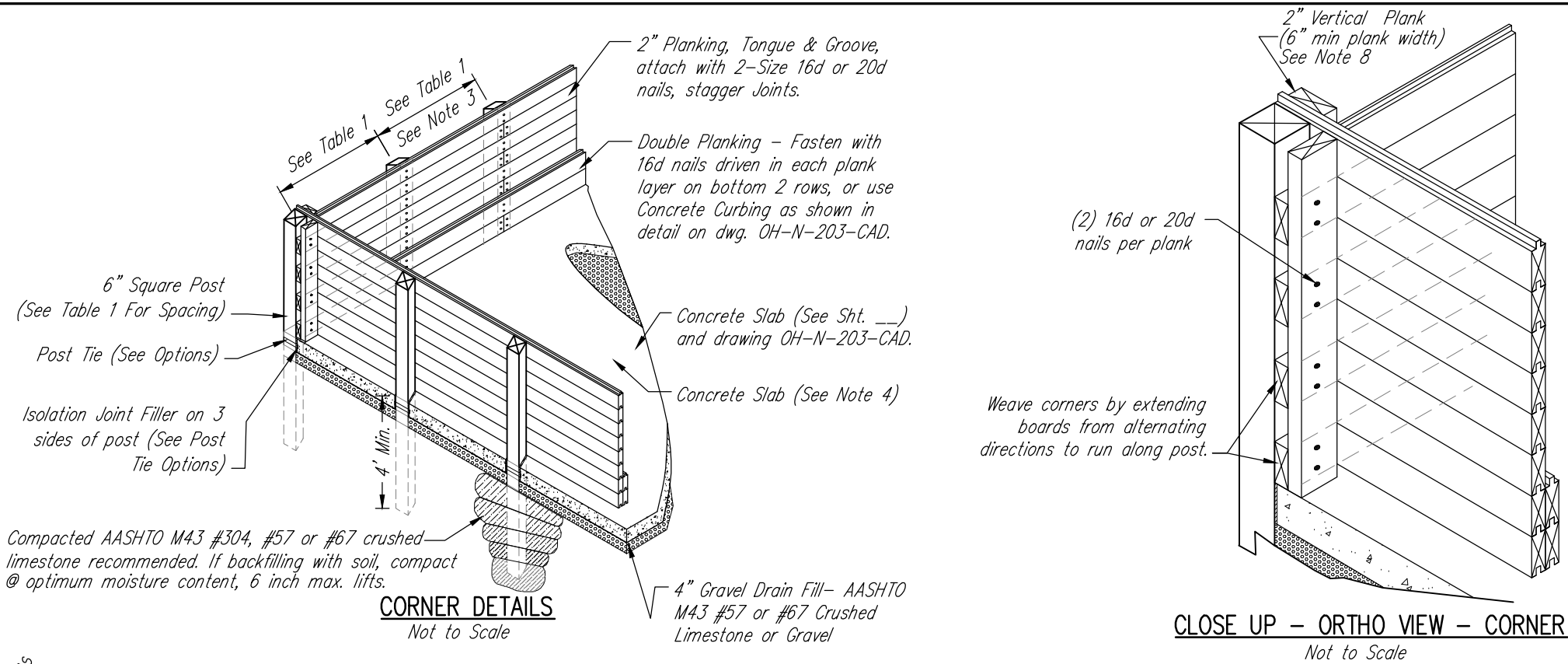
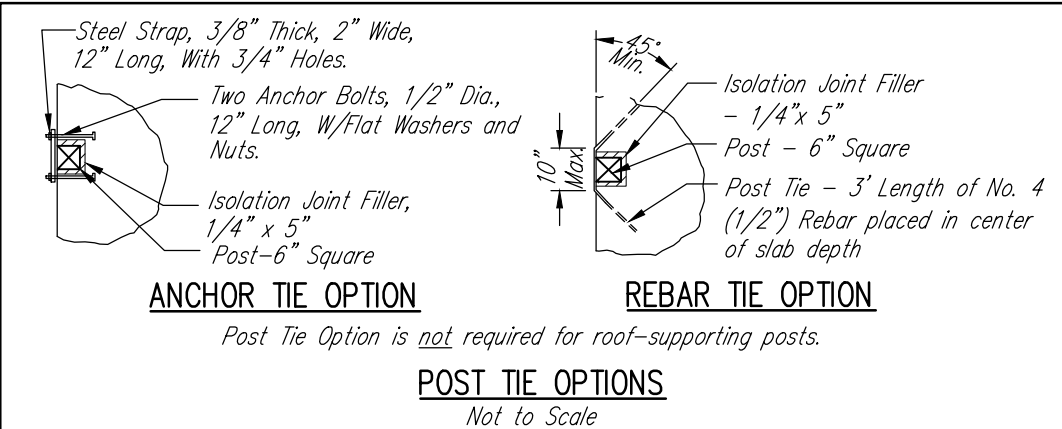
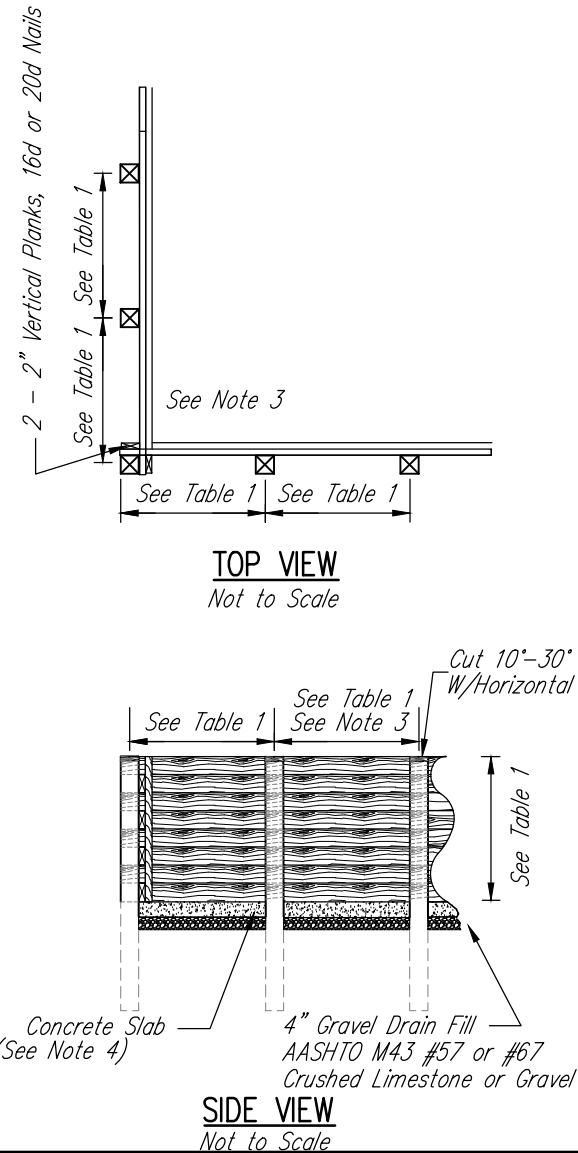


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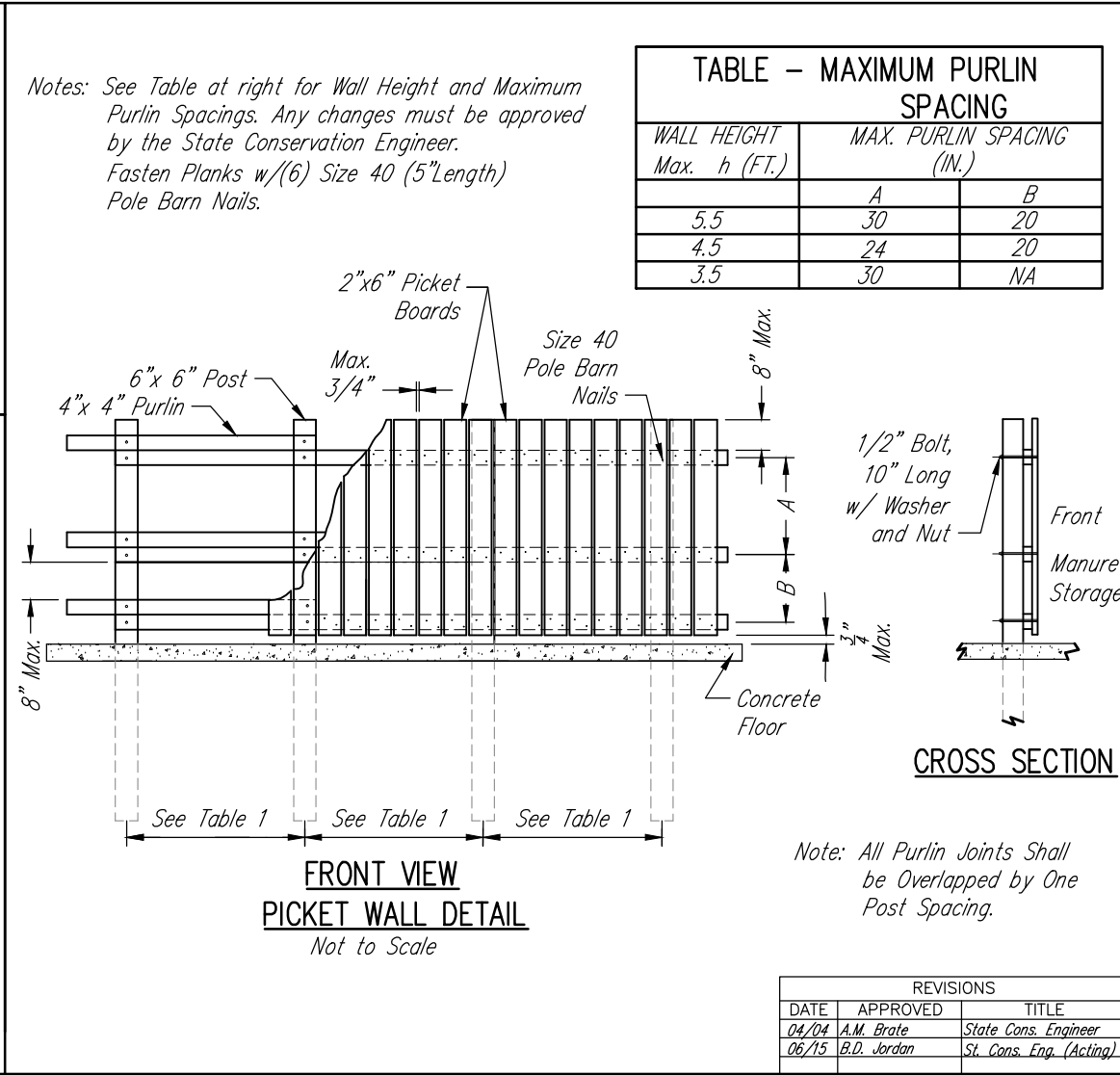
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File No. _____

Drawing No. OH-N-531-CAD

Sheet _____ of _____

County, Ohio

Township _____

PLANK & PICKET WALL DETAILS

Designed _____ Date _____

Drawn _____

Checked _____

Approved _____